

Scientist of the Month



Julie-Anne Brown

Julie-Anne Brown, a fourth-year BLaST Scholar, is from Roseville, California. She grew up in the military and has lived in Hawaii, Florida, and Alaska. Brown is a senior and will graduate May 2024 with her bachelor of science degree in biology with a concentration in physiology. She is also a third-year UAF Honors student and Climate Scholar. She is applying to PhD programs in cell and molecular biology with a concentration in animal genetics. Brown enjoys reading, going on trips with her family, and hanging out with her cat, Calypso, while watching TV.

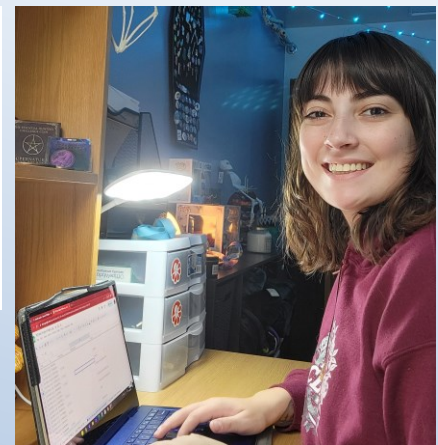
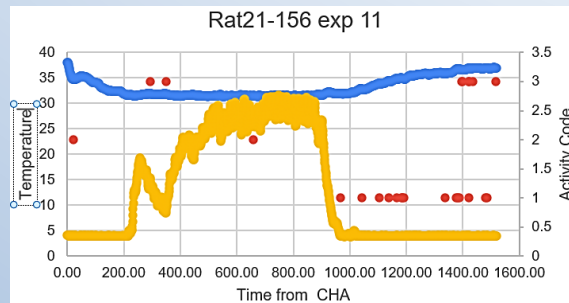
Research

Brown joined Dr. Kelly Drew's rat laboratory project as a freshman first-year student and contributed to their proposal process for a successful NIH grant. Brown analyzed videos of rats' post-surgical procedures to catalog abnormal behavior, and now is creating graphs which examine the correlation between cage temperature, body temperature, and the activity noticed. She also socialized the rats to human interaction, leading to a decrease in overall stress. Brown recently joined the research team at the International Arctic Research Center and University of Alaska Museum of the North, working under fisheries graduate student Maggie Harings, and Drs Erik Schoen and Andrés López. Brown helps with sample preparation, DNA extraction, PCR, and gel electrophoresis on environmental DNA filters. The goal of this project is to identify the abundance of salmon DNA in the water to enhance the local capacity for sustainable fish population management in the Arctic-Yukon-Kuskokwim (AYK) region. By developing this approach, the project aims to help tribal and agency scientists monitor and hopefully reverse the adverse impacts of declining salmon runs on subsistence communities, an accelerating issue in Alaska.

Mentoring

Brown shares, "I want to thank Hoshi Sugiura (lab technician) and Dr. Kelly Drew for helping me navigate the world of research as well as teaching me the importance of patience. It was a slow start and at times, been difficult, but they always helped me even when I had questions which had quite simple answers. I want to thank Maggie for taking time out of her graduate studies to teach me important lab skills to further my focus in research. I want to thank my BLaST Research Advising,

and Mentoring Professionals (RAMPs), Hannah Robinson (former RAMP) and Sarah Barcalow, for helping me navigate not only research, but life in general. All of you have also had a part in my studies, whether it was proctoring an exam, helping me answer a question, or just being there when I needed someone. Thank you so much." Maggie Harings shared, "Julie-Anne has proven to be a diligent researcher in the lab and I have no doubt that her inquisitive nature will continue leading her down a path of success!" Dr. Andrés López, Brown's new faculty mentor for fall 2023, shared, "I am excited to have Julie-Anne work with our eDNA team and look forward to her contributions over the coming months!"



Top left: BLaST Scholar Julie-Anne Brown, Fairbanks, Alaska (All Photo Credits: J. Brown, Sept. 2023)
Left: Data graph by Brown and fellow undergraduate lab member Ethan Hack, Fairbanks, Alaska.
Right: Brown working on graphing at her desk at UAF.